CHAPTER 7

RIGGING M561, 1 1/4-TON CARGO TRUCK ON THE TYPE V PLATFORM

Section I

RIGGING TRUCK FOR LOW-VELOCITY AIRDROP

7-1. Description of Load

The M561, 1 1/4-ton cargo truck (line number X39940) is rigged on a 20-foot, type V platform with three G-11A or G-11B cargo parachutes. An accompanying load of no more than 2,500 pounds may be airdropped as part of this load. If the accompanying load weighs more than 2,040 pounds, three G-11B or four G-11A cargo parachutes are needed.

7-2. Preparing Platform

Prepare a 20-foot, type V airdrop platform as described below.

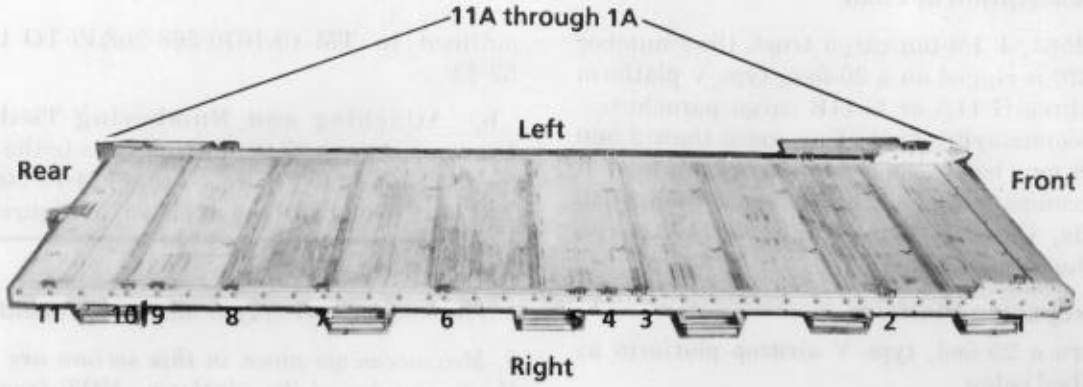
a. Assembling and Inspecting Platform. Inspect, or assemble and inspect, the platform as outlined in TM 10-1670-268-20&P/ TO 13C7-52-22.

b. Attaching and Numbering Tiedown Clevises. Attach 22 tiedown clevises to the platform according to Figure 7-1 and FM 10-500/TO 13C7-1-5. Number them as shown in Figure 7-1.

NOTES:

1. The nose bumper may or may not be installed.

2. Measurements given in this section are from the front edge of the platform, NOT from the front edge of the nose bumper.



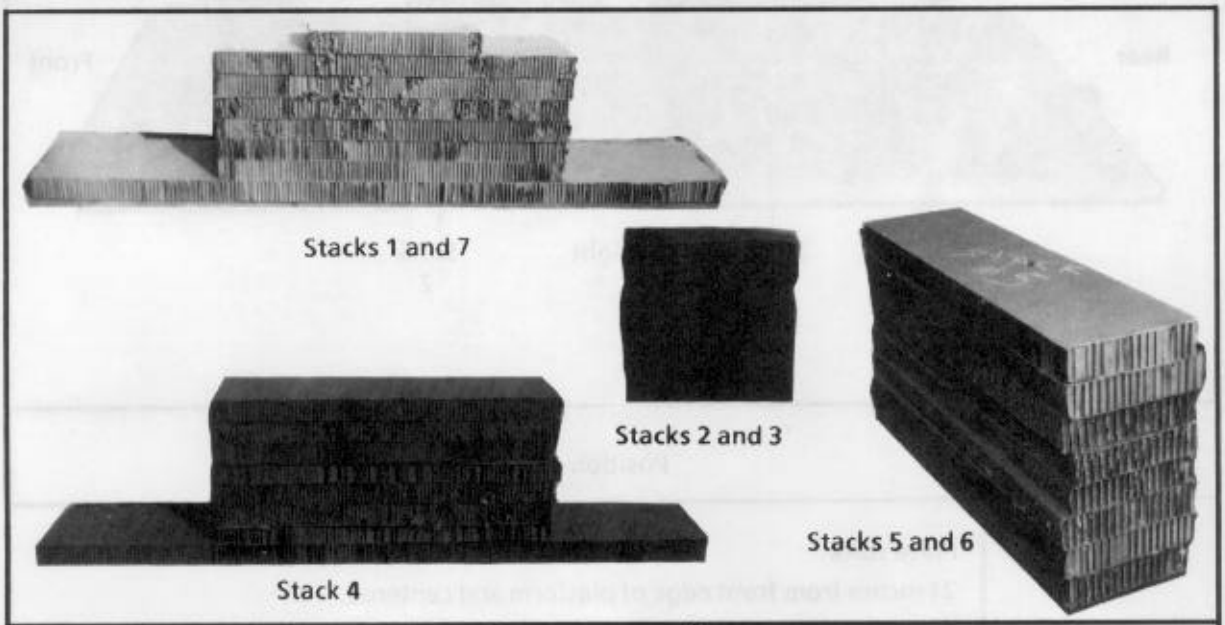
Step:

1. Install a multipurpose link on the front of each platform side rail.
2. Install a tiedown clevis on bushing 3 on each multipurpose link.
3. Starting at bushing 1 behind each multipurpose link, install a clevis on bushings 4, 14, 15, 16, 21, 26, 29, 32, 33, and 36.
4. Number the clevises 1 through 11 on the right rail and 1A through 11A on the left rail.

Figure 7-1. Platform prepared

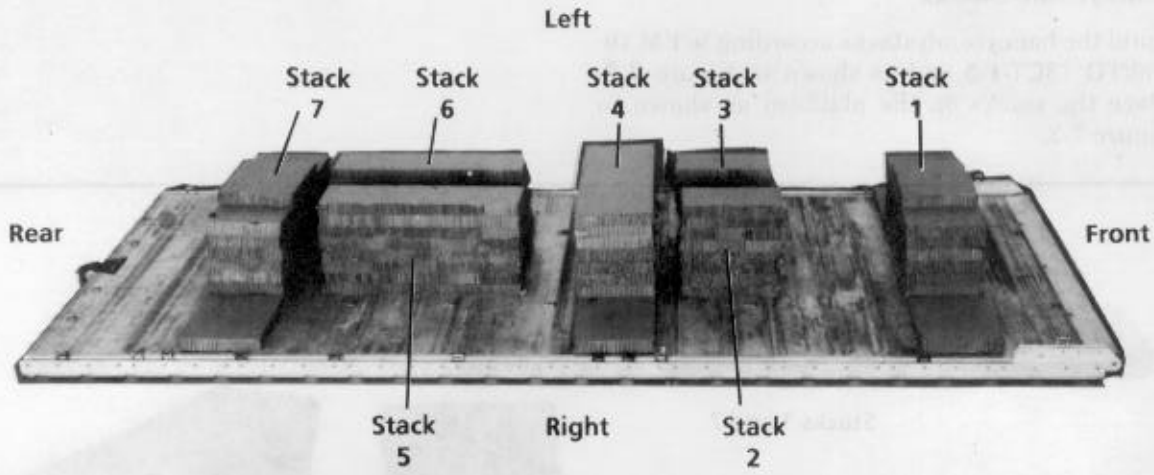
7-3. Building and Placing Honeycomb Stacks

Build the honeycomb stacks according to FM 10-500/TO 13C7-1-5 and as shown in Figure 7-2. Place the stacks on the platform as shown in Figure 7-3.



Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
1	1	96	18	Honeycomb	Use honeycomb as base layer.
	6	48	18	Honeycomb	Stack honeycomb flush and center on the 96- by 18-inch piece.
	1	24	18	Honeycomb	Center honeycomb on top of the stack.
2	8	12	24	Honeycomb	Stack honeycomb flush.
3	8	12	24	Honeycomb	Stack honeycomb flush.
4	1	96	18	Honeycomb	Use honeycomb as base layer.
	7	48	18	Honeycomb	Stack honeycomb flush and center on the 96- by 18- inch piece.
5	8	12	48	Honeycomb	Stack honeycomb flush.
6	8	12	48	Honeycomb	Stack honeycomb flush.
7	1	96	18	Honeycomb	Use honeycomb as base layer.
	6	48	18	Honeycomb	Stack honeycomb flush and center on the 96- by 18-inch piece.
	1	24	18	Honeycomb	Center honeycomb on top of the stack.

Figure 7-2. Honeycomb stacks prepared



Stack Number	Position of Stack on Platform
	Place stack:
1	21 inches from front edge of platform and centered.
2	30 inches from rear of stack 1 and 31 inches from right rail.
3	30 inches from rear of stack 1 and 31 inches from left rail.
4	7 inches from rear of stacks 2 and 3 and centered.
5	14 inches from rear of stack 4 and 31 inches from right rail.
6	14 inches from rear of stack 4 and 31 inches from left rail.
7	35 inches from rear edge of platform and centered.

Figure 7-3. Honeycomb stacks placed on platform

7-4. Preparing Truck

Prepare the truck as described below and as shown in Figures 7-4 and 7-5.

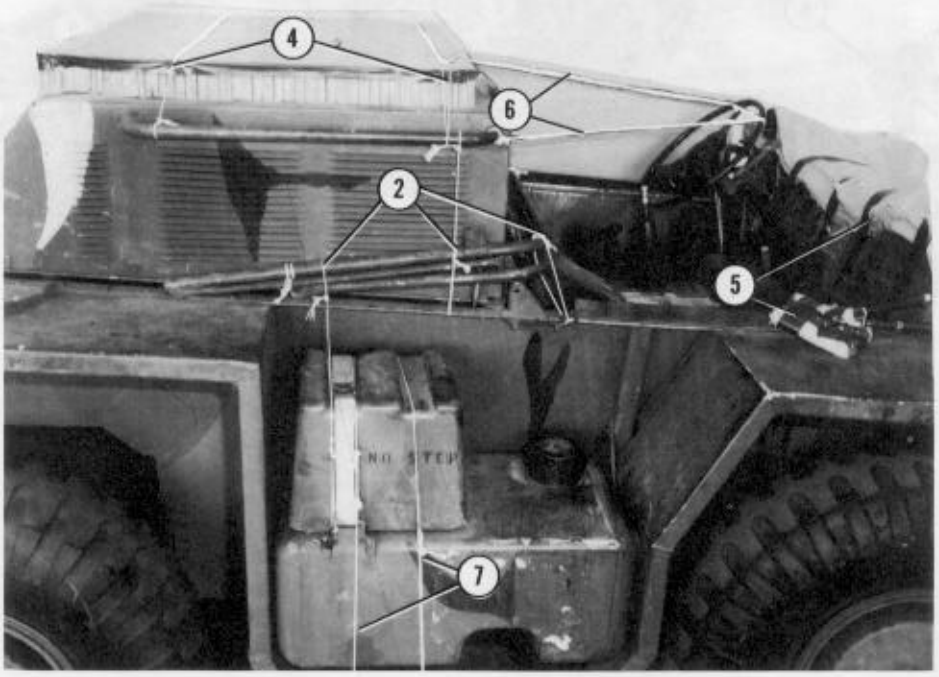
a. Checking Fuel Tank. Make sure that the fuel tank is no less than 1/2 or more than 3/4 full.

b. Removing Truck Components. Remove the following components as outlined in TM 9-2320-242-10-1:

- Tractor canopy and frame assembly.
- Windshield assembly and stanchions.
- End curtains.
- Carrier canopy and bows.
- Carrier seat belts and safety belt.
- Carrier seat backs.

c. Stowing Windshield and Wipers. Wrap the clamps, nuts, and bolts that were removed

from the windshield in cellulose wadding. Tape the cellulose wadding, and stow the bundle behind the driver's seat. Stow the windshield wipers in the clips provided, and tape the wiper switches in the OFF position. Wrap the windshield in cellulose wadding, and stow it along with the three stanchions in the windshield stowage compartment. Tape the compartment door shut.



(1) Tape the windshield stowage compartment door shut (not shown).

(2) Tie the frame assembly to the tractor with type III nylon cord.

(3) Raise the seat cushions, and tie them in place with type III nylon cord (not shown).

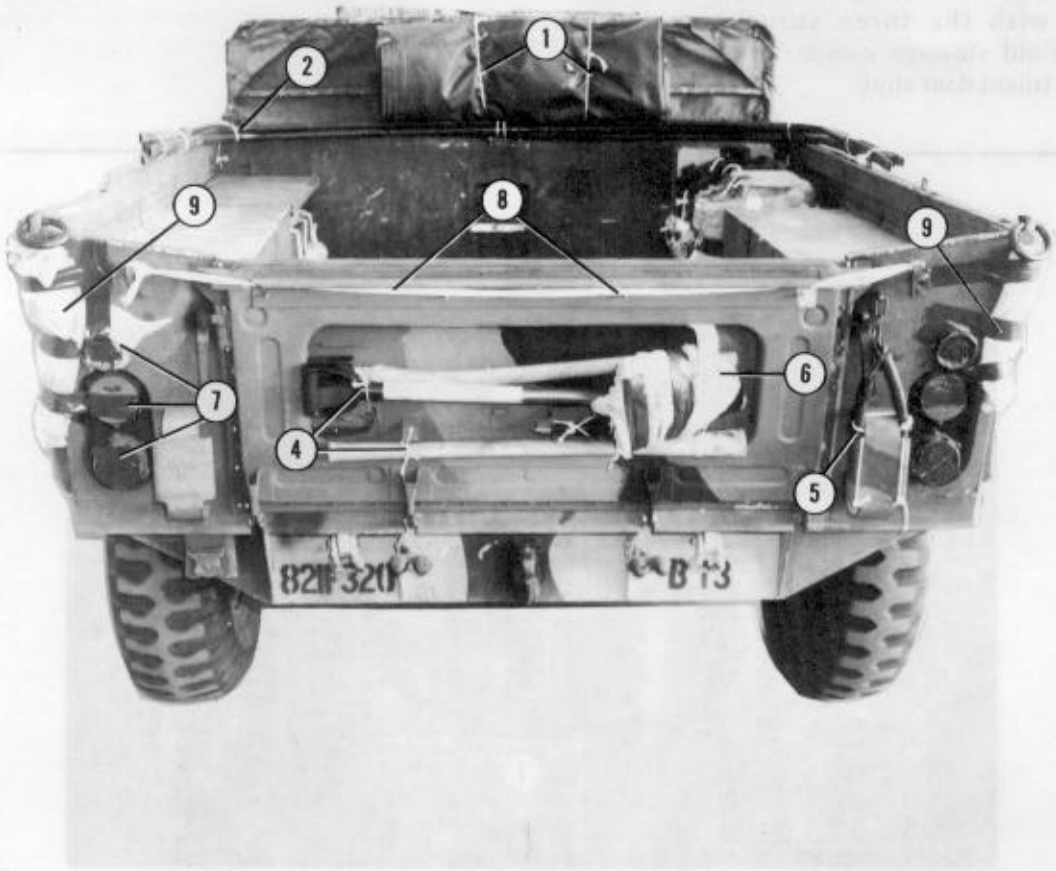
(4) Place a 36- by 48-inch piece of honeycomb on top of the engine cover. Tape the edges. Tie the honeycomb in place with type III nylon cord.

(5) Wrap the rearview mirrors in cellulose wadding, and tie them to the dash with type III nylon cord. Cover the dash with cellulose wadding, and tape the wadding in place.

(6) Form a safety web with type III nylon cord tied to the steering wheel and the handles of the engine cover.

(7) Tie the battery boxes closed with type III nylon cord.

Figure 7-4. Truck cab prepared

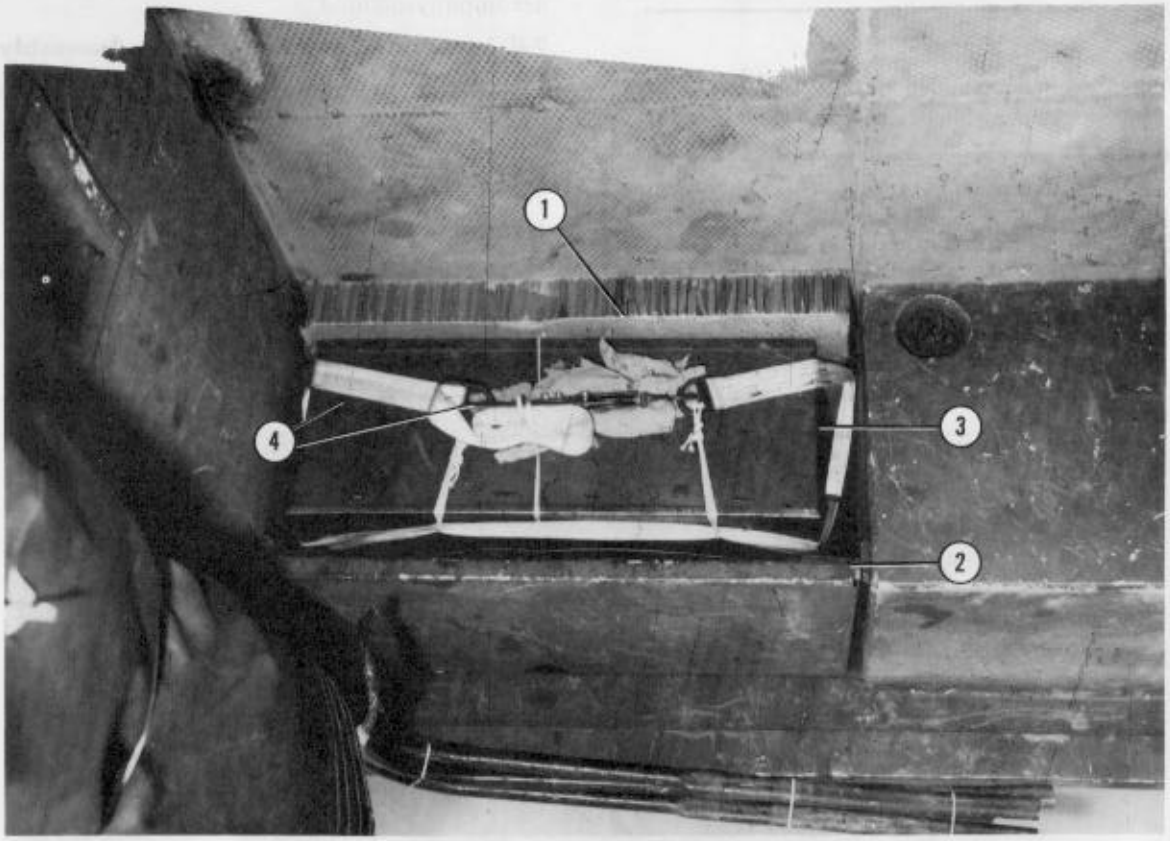


1. Fold the carrier canopy, and tie it to the guardrail.
2. Tie the carrier bows to the front of the carrier.
3. Tie the seat backs to the right inside of the carrier (not shown).
4. Tie the pioneer tools in their rack.
5. Tie the tailgate chains to the bumperettes with type III nylon cord.
6. Wrap the shovel with cellulose wadding and tape.
7. Tape all lights and reflectors.
8. Tie the tailgate shut with 1/2-inch tubular nylon webbing.
9. Tape cellulose wadding to each rear corner.

Figure 7-5. Truck prepared, rear view

e. Stowing Equipment Box. Place the safety belts in the equipment box, and stow the equipment box in the left front corner of the carrier body as shown in Figure 7-6.

f. Installing Medium Clevises. Bolt a medium clevis assembly to each front shackle bracket.



(1) Tie the lid of the equipment box shut with type III nylon cord.

(2) Place a 16- by 32-inch piece of honeycomb on the carrier floor in the front left corner.

(3) Place the equipment box on the honeycomb.

(4) Run a 15-foot tiedown strap over the top of the equipment box and down through the tiedown rings in the floor of the carrier. Secure the tiedown strap with a D-ring and a load binder according to FM 10-500/TO 13C7-1-5. Secure the load binder to the top of the strap with 1/2-inch tubular nylon webbing.

NOTE: If the dimensions of the equipment box differ from the one shown, adapt the procedures given to avoid metal-to-metal contact between the equipment box and the carrier body.

Figure 7-6. Equipment box stowed

NOTE: If the truck has an antenna and mount, remove the top half of the antenna. Tape the top half to the lower half. Bend both halves downward, and tie them to the vehicle wih type III nylon cord.

7-5. Stowing Accompanying Load

CAUTION

Only ammunition listed in FM 10-553/TO13C7-18-41 may be airdropped as part of this load.

Stow the accompanying load of no more than 2,500 pounds in the carrier body of the truck. Make sure the accompanying load does not extend above the sides of the carrier body and meets the restrictions in FM 10-500/TO 13C7-1-5. The truck shown in this section has no accompanying load.

7-6. Installing Interbody Truss Assembly

Install the interbody truss assembly between the tractor and the carrier according to TM 9-2320-242-10-1 and as shown in Figure 7-7.

7-7. Installing Suspension Slings and Deadman's Tie

Install the suspension slings and the deadman's tie according to FM 10-500/TO 13C7-1-5 and as shown in Figure 7-8.

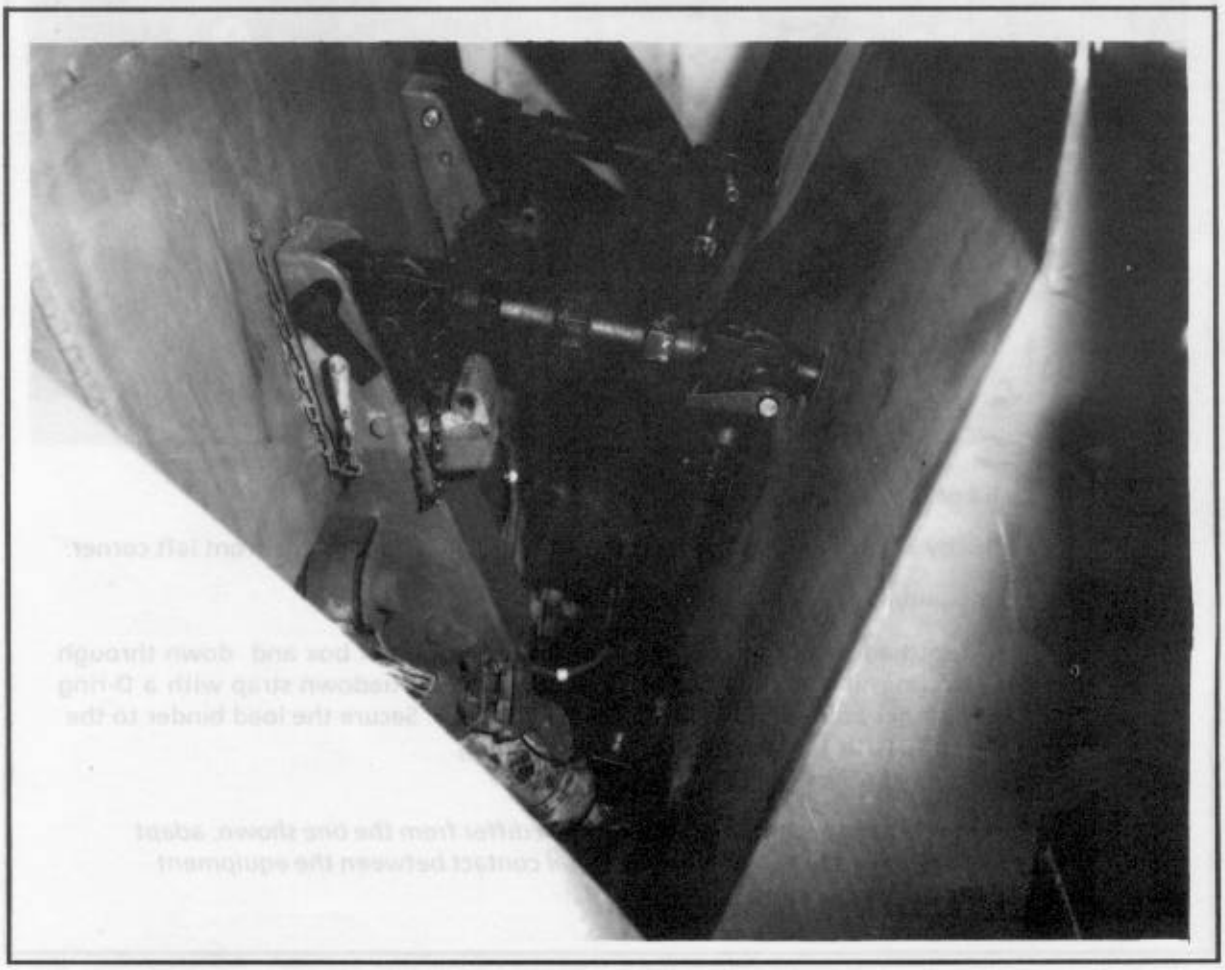
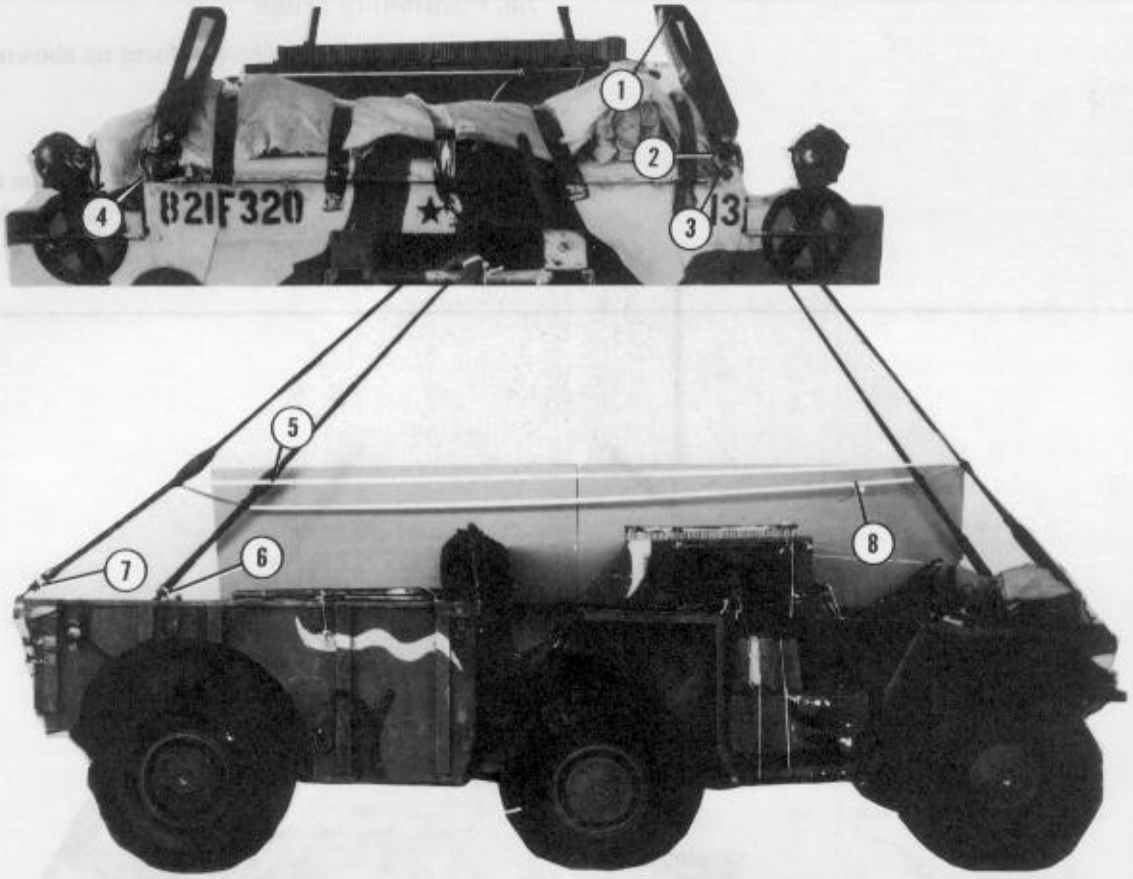


Figure 7-7. Interbody truss assembly installed



1. Pass a 3-foot (2-loop), type XXVI nylon sling through an end loop of an 11-foot (2-loop), type XXVI nylon sling.
2. Fit a small suspension clevis to each end of the 3-foot sling.
3. Bolt the clevises to the right front suspension point.
4. Repeat steps 1 and 2, and bolt the clevises to the left front suspension point.
5. Join a 3-foot (2-loop), type XXVI nylon sling to an 11-foot (2-loop), type XXVI nylon sling with a type IV link assembly. Install a link cover on the type IV link.
6. Bolt the 3-foot sling to the right rear suspension point with a small suspension clevis.
7. Repeat step 5, and bolt the 3-foot sling to the left rear suspension point with a small suspension clevis.
8. Extend the slings, and install a deadman's tie according to FM 10-500/TO 13C7-1-5.

NOTE: Type X nylon slings of equal strength may be used. See FM 10-500/TO 13C7-1-5, Table 2-3, for restrictions.

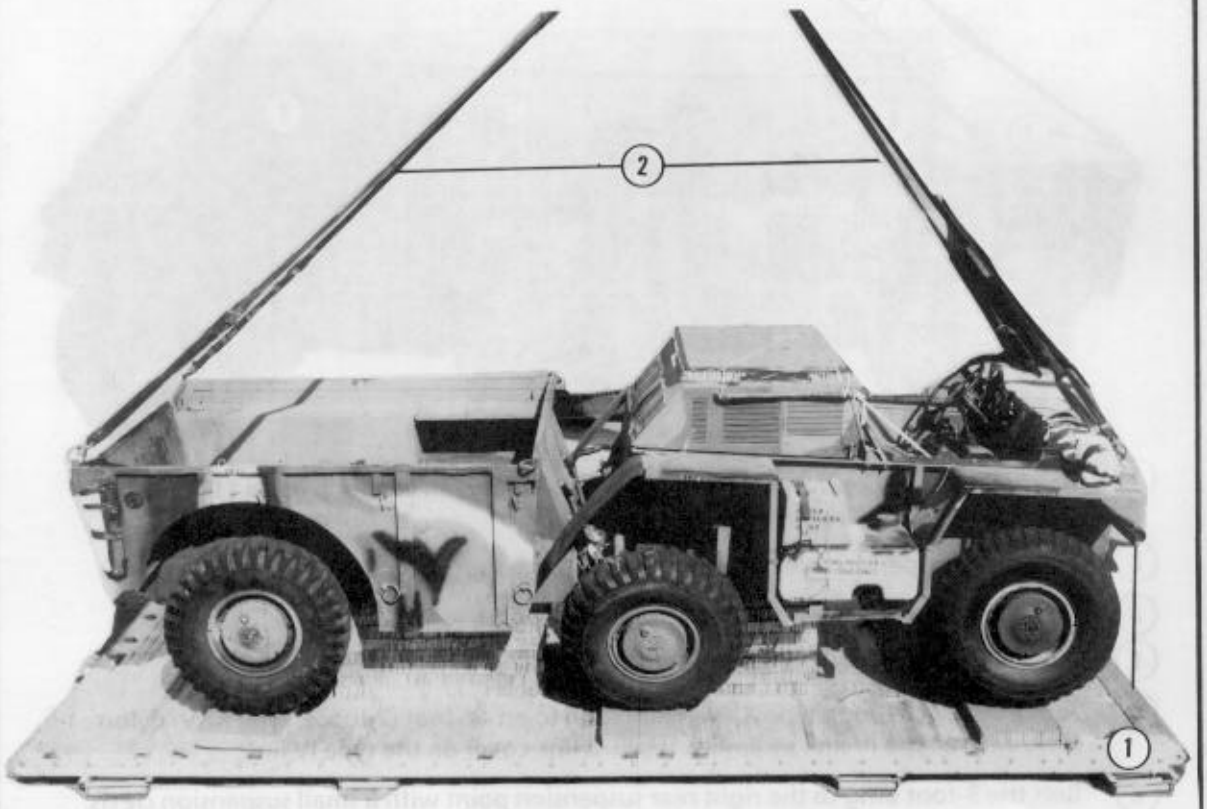
Figure 7-8. Suspension slings and deadman's tie installed

7-8. Positioning Truck

Position the truck on the platform as shown in Figure 7-9.

7-9. Installing Drive-Off Aids

Install the aids just before the truck touches the honeycomb stacks. Install the aids as shown in Figure 7-10.



(1) Center the truck on the honeycomb stacks with the front bumper even with the front edge of the platform.

(2) Leave the load suspended until the drive-off aids are installed (see Figure 7-10).

Figure 7-9. Truck positioned on platform

NOTE: The drive-off aids must be put on the truck before the truck is lowered onto the stacks.

(1) Wrap a traction web around the right center wheel in a clockwise direction with the U-end to the rear of the wheel.

(2) Pass the joint end through the U-end, and run the joint end rearward along the platform. Pull on the joint end until all the slack has been removed from the traction web. If the joint end of the traction web extends past the rear of the platform, wrap more web around the center wheel.

(3) Lace the hook pocket to the traction web at a place near the joint end (not shown).

(4) Place the beveled edge of a hook under the rear end of the platform. Connect the joint end of the traction web to this hook. Make any adjustments needed to make the traction web run in a straight line from the wheel to the hook (not shown).

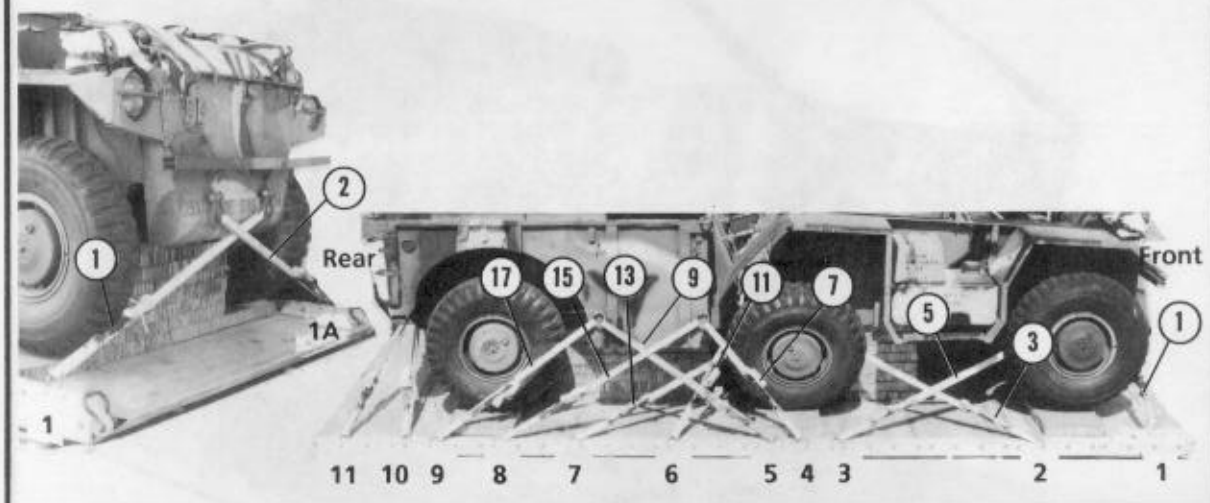
(5) Attach a second traction web to the left center wheel in the same manner as in steps 1 through 4 above (not shown).

(6) Remove the hooks from the platform. Fold them with their pocket and the joint end of the traction web to a place on the platform just to the rear of the rear wheel. Lower the truck onto the honeycomb stacks. Tape the end of the traction web, hook, and hook pocket to the platform.

Figure 7-10. Drive-off aids installed

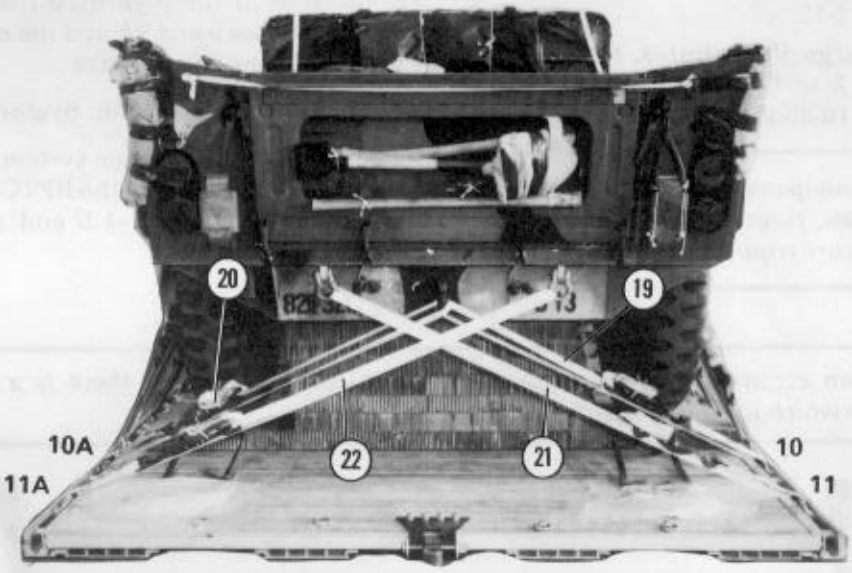
7-10. Lashing Truck

Lash the truck to the platform according to FM 10-500 / TO 13C7-1-5 and as shown in Figure 7-11.



Lashing Number	Tiedown Clevis Number	Instructions
		Pass lashing:
1	1	Through left front clevis.
2	1A	Through right front clevis.
3	2	Around right front part of A-frame, under brake line.
4	2A	Around left front part of A-frame, under brake line.
5	3	Through spring support bracket.
6	3A	Through spring support bracket.
7	4	Through tiedown shackle 1, right side.
8	4A	Through tiedown shackle 1, left side.
9	5	Through tiedown shackle 2, right side.
10	5A	Through tiedown shackle 2, left side.
11	6	Around carriage support bracket, right side.
12	6A	Around carriage support bracket, left side.
13	7	Around leaf spring, right side.
14	7A	Around leaf spring, left side.
15	8	Through tiedown shackle 1, right side.
16	8A	Through tiedown shackle 1, left side.
17	9	Through tiedown shackle 2, right side.
18	9A	Through tiedown shackle 2, left side.

Figure 7-11. Truck lashed to platform



Lashing Number	Tiedown Clevis Number	Instructions
		Pass lashing:.
19	10	Through towing pintle.
20	10A	Through towing pintle.
21	11	Through left rear towing shackle.
22	11A	Through right rear towing shackle.

Figure 7-11. Truck lashed to platform (continued)

7-11. Stowing Cargo Parachutes

Stow the cargo parachutes as described below.

a. Building Stowage Platform. Build a parachute stowage platform in the carrier as shown in Figure 7-12.

b. Stowing Cargo Parachutes. Prepare and stow three G-11A or G-11B cargo parachutes according to FM 10-500/TO 13C7-1-5.

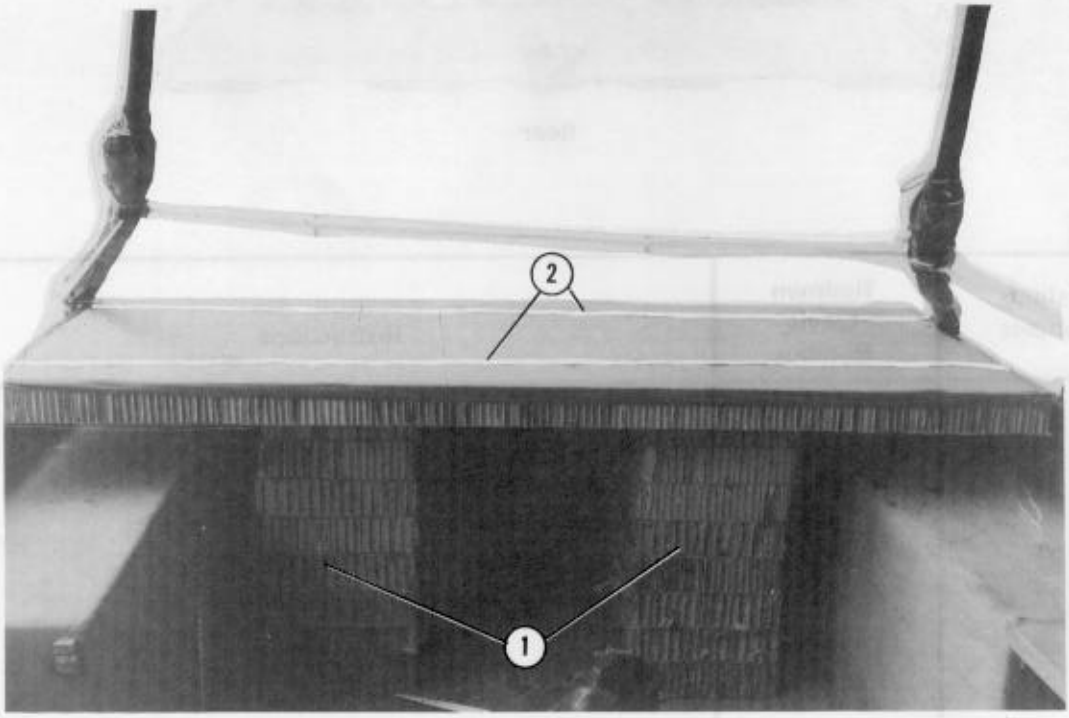
NOTE: If an accompanying load weighs more than 2,040 pounds, three G-11B or four G-11A cargo parachutes are required.

c. Installing Parachute Restraint. Use a 9-yard and 6-yard length of type VIII nylon webbing, and install a parachute restraint system according to FM 10-500/TO 13C7-1-5. Tie the ends of the 9-yard restraint strap to tiedown clevises 9 and 9A and the ends of the 6-yard strap to the bumperettes .

7-12. Installing Extraction System

Install the EFTC extraction system on this load. Install the components of the EFTC according to FM 10-500 / TO 13C7 -1-5 and as shown in Figure 7-13.

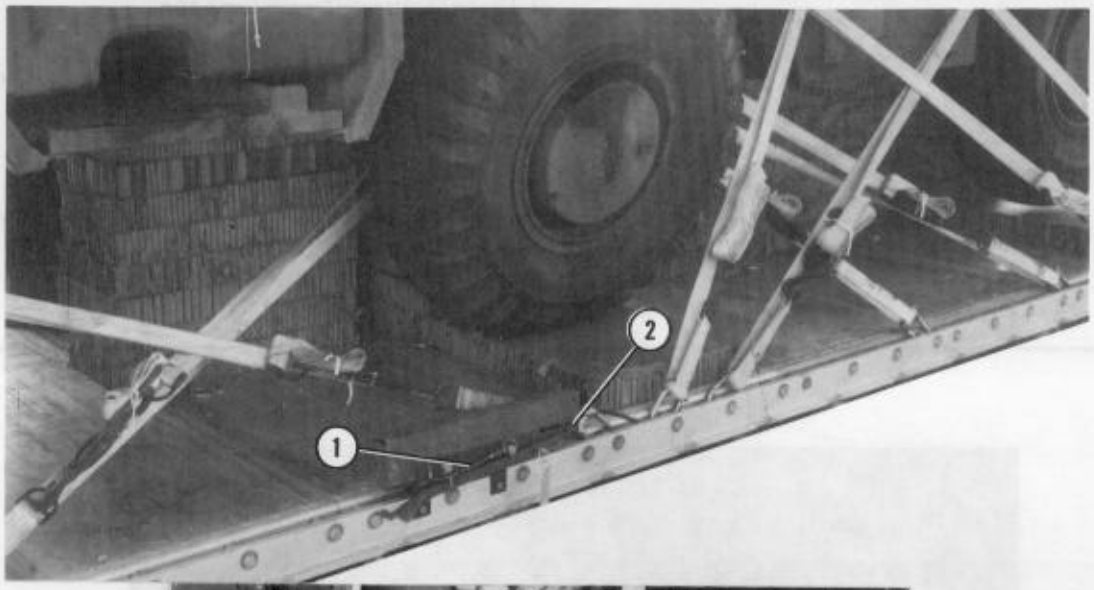
NOTE: If an accompanying load is a part of this load, ensure that there is a smooth surface on which to stow the cargo parachutes.

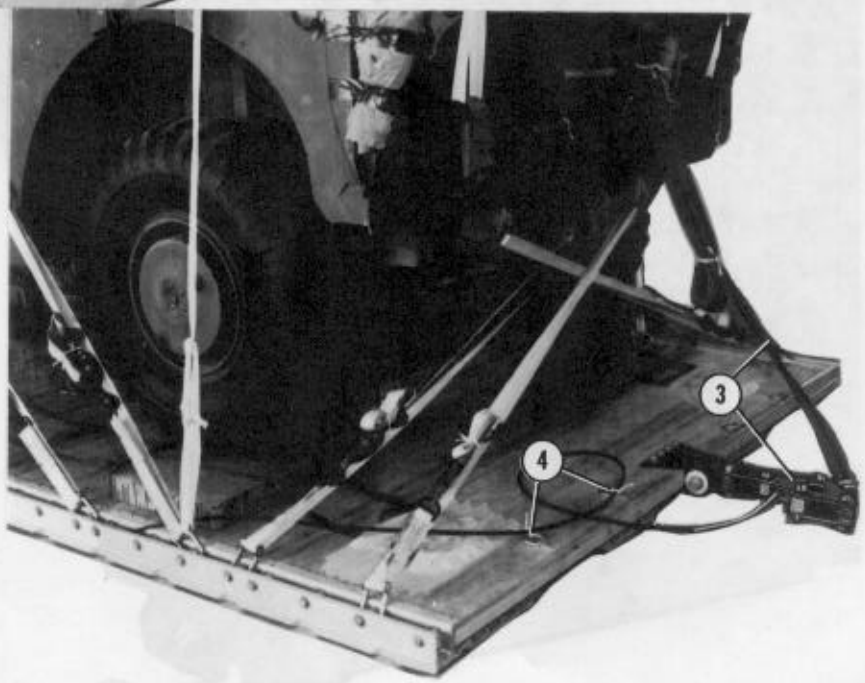


(1) Make two stacks of honeycomb with eight 12- by 24-inch pieces of honeycomb in each stack. Place the two stacks in the carrier bed flush against the tailgate.

(2) Place a 36- by 78-inch piece of honeycomb on top of the two stacks. Tape the edges and tie the honeycomb with type III nylon cord.

Figure 7-12. Stowage platform installed





1. Install the EFTC mounting brackets in the rear set of holes on the left platform rail.
2. Install the actuator, and attach a 16-foot cable.
3. Install the latch assembly, attach the cable, and install a 12-foot deployment line according to FM 10-500/TO 13C7-1-5.
4. Secure the cable to the two left rear tiedown rings with 80-pound cotton webbing.

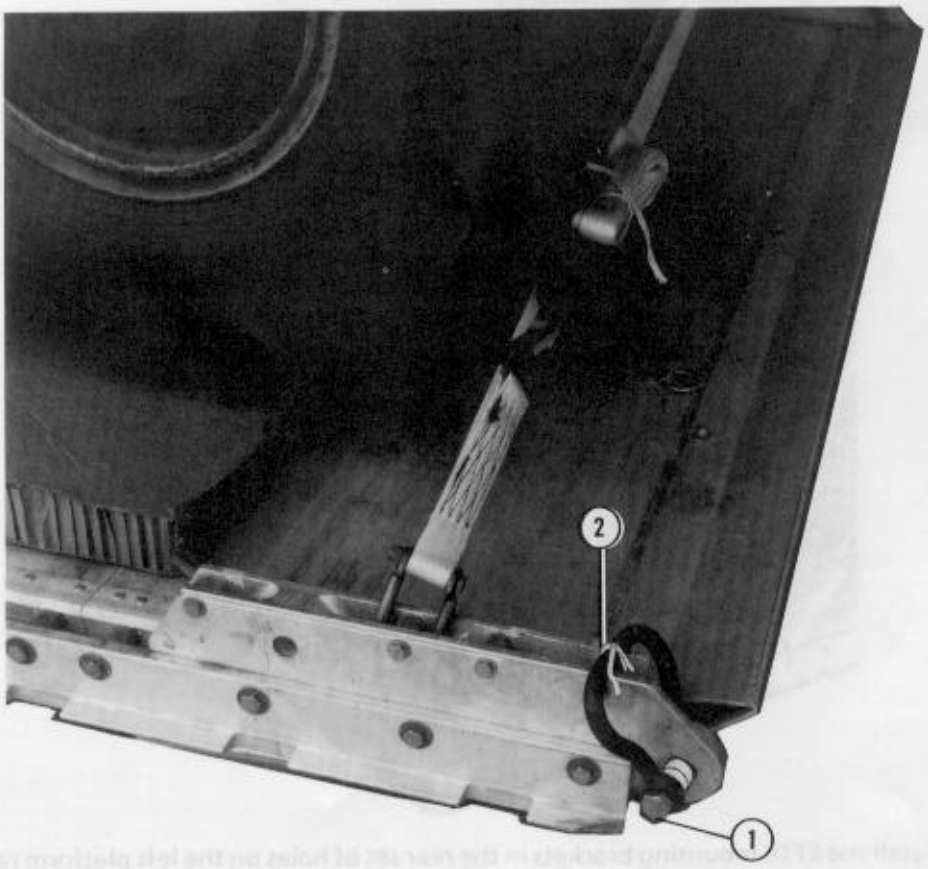
Figure 7-13. Components of EFTC installed

7-13. Installing Provisions for Emergency Restraint

Install medium clevises to the multipurpose links as emergency restraint provisions as shown in Figure 7-14.

7-14. Installing Release System

Prepare and install an M-1 cargo parachute release according to FM 10-500/TO 13C7-1-5 and as shown in Figure 7-15.



(1) Install a medium clevis in the front end hole of each front multipurpose link. Use spacers between the arms of the clevis and the multipurpose link.

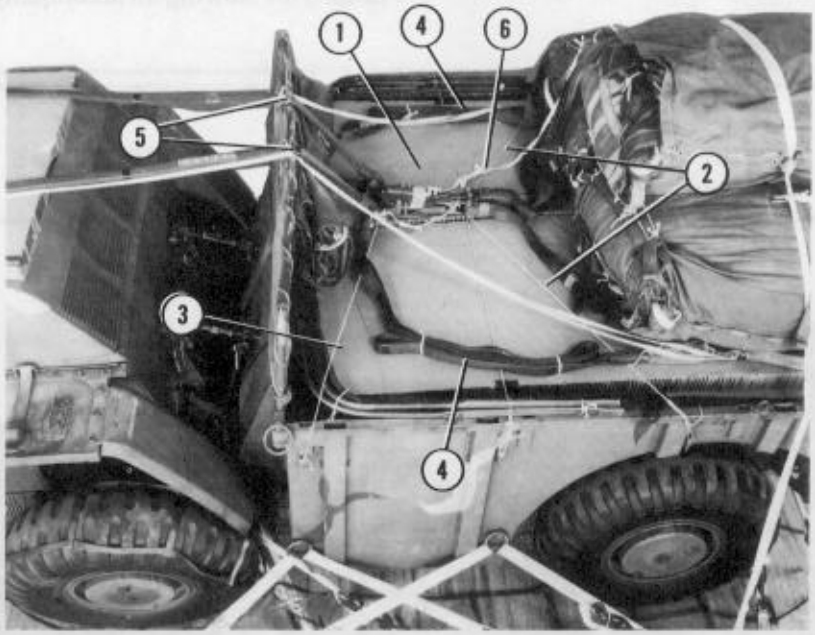
(2) Raise the clevis, and tie it to the nearest bushing with 1/4-inch cotton webbing.

Figure 7-14. Emergency restraint installed

7-15. Placing Extraction Parachute

Place the extraction parachute as described below.

a. C-130 Aircraft. Place a 22-foot cargo extraction parachute on the load for installation in the aircraft. Include an extraction line bag with this load.



(1) Level with honeycomb any accompanying load between the parachutes and the front of the carrier body. If there is no accompanying load, glue ten 12- by 20-inch pieces of honeycomb together to make a parachute release platform. Place it in the carrier body in an appropriate location for supporting the M-1 release.

(2) Center the M-1 release on the honeycomb. Run a length of type III nylon cord through the parachute connectors, and tie the ends of the cord to the third tarpaulin hooks from the front end of the carrier.

(3) Run a second length of type III nylon cord around the lower spacer, and tie the ends of the cord to the front outside tarpaulin hooks.

(4) Fold the slack in the rear suspension slings, and tie the folds with 80-pound cotton webbing.

(5) Tie the front suspension slings to the carrier body guardrail with 80-pound cotton webbing.

(6) Tie the free end of the arming wire lanyard to the right front carrying handle of the top parachute.

Figure 7-15. M-1 cargo parachute release installed

b. C-141 Aircraft. Place a 22-foot cargo extraction parachute on the load for installation in the aircraft. This parachute needs a 140-foot (3-loop), type XXVI nylon extraction line. Include an extraction line bag with this load.

7-16. Marking Rigged Load

Mark the rigged load according to FM 10-500/TO 13C7-1-5 using the data in Figure 7-16.

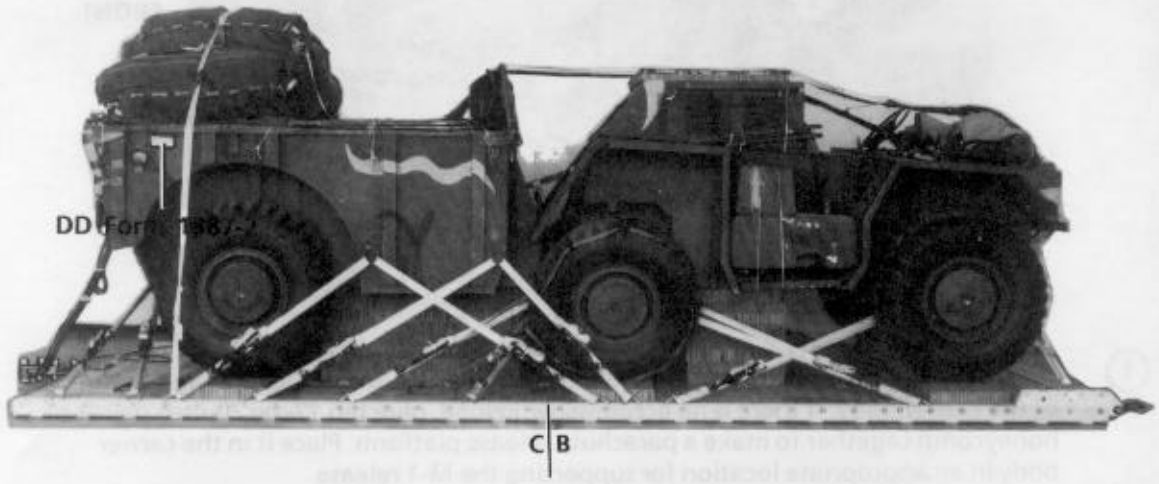
Complete DD Form 1387-2 (Special Handling Data/Certification), and securely attach it to the load. Indicate on the form that the vehicle fuel tank and the batteries have been prepared according to AFR 71-4/TM 38-250.

7-17. Equipment Required

Use the equipment listed in Table 7-1 to rig this load. This table does not include equipment needed for stowing an accompanying load.

CAUTION

Make the final rigger inspection required in FM 10-500/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight:	As Shown	11,400 pounds
	Maximum Allowed	12,000 pounds
Height		94 inches
Width		108 inches
Length		263 1/2 inches
Overhang:	Front	4 1/2 inches
	Rear	19 inches
CB (from front edge of platform)		124 inches

NOTE: If an accompanying load is rigged as a part of this load, the weight, number of parachutes, and CB must be recomputed.

Figure 7-16. Truck rigged on type V platform for low-velocity airdrop

Table 7-1. Equipment required for rigging the M561, 1 1/4-ton cargo truck for low-velocity airdrop on the type V platform

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gal	As required
	Clevis, suspension:	
4030-00-360-0304	5/8-in (small)	6
4030-00-678-8562	3/4-in (medium)	4
4030-00-090-5354	1-in (large)	4
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-168-6068	Coupling, extraction force transfer (platform)	1
1670-00-360-0328	Cover, clevis, large	3
1670-00-360-0329	Cover, link	6
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-823-5042	Deployment line, 16-ft (3-loop), type X nylon webbing	1
1670-00-431-8486	Kit, vehicle, drive-off aid	1
	Line, extraction, type XXVI nylon webbing:	
1670-01-062-6313	60-ft (3-loop) (for C-130)	1
1670-01-107-7651	140-ft (3-loop) (for C-141)	1
1670-00-783-5988	Link assembly, type IV	6
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by-96-in:	14 sheets
	12- by 20-in	(10)
	12- by 24-in	(32)
	12- by 48-in	(16)
	16- by 32-in	(1)
	18- by 24-in	(2)
	36- by 48-in	(1)
	36- by 78-in	(1)
	48- by 18-in	(19)
	96- by 18-in	(3)
1670-01-183-2678	Panel, sling, extraction line	2
1670-00-269-1107	Parachute, cargo, G-11A *or*	3
1670-01-016-7841	Parachute, cargo, G-11B	3
1670-00-687-5458	Parachute, cargo extraction, 22-ft	1
	Platform, airdrop, type V, 20-ft:	
	Bracket:	
1670-01-162-2375	Inside EFTA	1
1670-01-162-2374	Outside EFTA	1
1670-01-162-2372	Clevis, load tiedown	22
1670-01-162-2376	Extraction bracket assembly	1
1670-01-162-2381	Multipurpose link	2
1670-01-162-2387	Pad, roller, 20-ft	4
1670-01-168-8397	Panel, platform, main	9
1670-01-168-8398	Panel, platform, rear	1

Table 7-1. Equipment required for rigging the M561, 1 1/4-ton cargo truck for low-velocity airdrop on the type V platform (continued)

National Stock Number	Item	Quantity
1670-01-162-2368	Rail, platform side, 20-ft:	2
5306-01-212-1264	Bolt, 1/2-in diam, 3 13/64-in long	(80)
1670-01-162-2384	Bushing	(80)
5310-00-167-0823	Washer, flat, 7/16-in diam	(80)
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop:	
	For riser extension:	
1670-00-753-3794	20-ft (2-loop), type X nylon webbing or	6
1670-01-062-6301	20-ft (2-loop), type XXVI nylon webbing	6
	For Suspension:	
1670-00-753-3788	3-ft (3-loop), type X nylon webbing or	4
1670-01-062-6301	3-ft (2-loop), type XXVI nylon webbing	4
1670-00-823-5040	11-ft (3-loop), type X nylon webbing or	4
1670-01-063-7760	11-ft (2-loop), type XXVI nylon webbing	4
1670-00-998-0116	Strap, parachute release, w fastener and release knife or	1
1670-00-040-8219	Strap, parachute release, multicut, comes w three knives	1
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tiedown assembly, 15-ft	23
	Webbing:	
8305-00-268-2411	Cotton, 80-lb	As required
8305-00-268-2453	Nylon, tubular, 1/2-in, 1,000-lb, olive drab	As required
8305-00-263-3591	Nylon, type VIII, 3,600-lb	15 yd